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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/822,085	03/30/2001	Warner George Harrison	99-845	8056

32127 7590 06/17/2004

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EXAMINER

CHARIOUI, MOHAMED

ART UNIT	PAPER NUMBER
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2857

DATE MAILED: 06/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/822,085

Applicant(s)

HARRISON, WARNER GEORGE

Examiner

Mohamed Charioui

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. **Claims 5 and 6** are objected to because of the following informalities: claim 5 recites the limitation "the ingress" in page 11, line 2. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 7-15, 18, 20, 21-23 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Allen (U.S. 5,205,173).

As per claims 1, 8-10, 14, 23 and 24, Allen teaches obtaining a first signal sample at a first location in the network (see col. 5, lines 48-66); obtaining a second signal sample at a second location in the network (see col. 5, lines 48-66); correlating the two signal samples (see col. 2, lines 45-65); and establishing the location of the injection point from the correlation result (see col. 2, lines 45-65).

As per claims 2 and 3, Allen further teaches calculating a propagation delay from the correlation result (see col. 2, lines 49-55); calculating an offset as being a function of the propagation delay (see col. 2, lines 55-62); finding a midpoint between the first location in the network and the second location in the network (see col. 2, lines

58-65); estimating the location of the injection point by locating a point that is a distance equal to the offset from the midpoint (see col. 2, lines 55-65).

As per claims 4, 21 and 22, Allen further teaches that the two signal samples are bandwidth limited (see col. 3, line 55 to col. 4, line 18).

As per claim 7, Allen further teaches integrating the samples over time (i.e. correlation techniques) (see col. 2, lines 45-65).

As per claims 11-13 and 20, Allen further teaches displaying the correlation result (see col. 2, lines 10-15).

As per claims 15 and 18, Allen further teaches that the means for obtaining the first signal sample includes a probe, a link, and a means for sending and receiving data (see col. 2, line 66 to col. 3, line 18).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 5 and 6** are rejected under 35 U.S.C. 103(a) as being unpatentable over Allen in view of Russo (U.S. 5,531,099).

Allen teaches the system as stated above except for determining the magnitude of the ingress.

Russo teaches this feature (see Abstract; col. 2, lines 37-53; and col. 5, lines 7-18). It would have been obvious to one having ordinary skill in the art at the time the

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invention was made to incorporate Russo's teaching into Allen's invention, because it would provide a determination of the magnitude of the signal at the location of ingress which it correspond to the peak signal. Therefore, an accurate determination of the location of the ingress would be performed.

4. **Claims 17 and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Allen in view of Lander et al. (U.S. 5,974,862).

Allen teaches the system as stated above except the means for sending and receiving data is a modem.

Lander et al. teach this feature (see col. 12, lines 25-40). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Lander et al.'s teaching into Allen's invention, because provide a modem for communicating data. Therefore, foreign signals detection and analysis would be performed remotely.

5. **Claim 16** is rejected under 35 U.S.C. 103(a) as being unpatentable over Allen in view of White (U.S. 6,476,951).

Westrom et al. teach the system as stated above except that the link is a fiber-optic link.

White teaches that fiber-optic link is used to transmit and receive data (see Abstract; Fig. 1; and col. 1, lines 12-37). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate White's teaching into Westrom et al.'s invention, because it would provide better transmission and reception rates of the signals; furthermore, fiber-optic medium exhibits high

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bandwidth and low transmission loss; therefore, using fiber-optic link would improve the performance transmission and reception of the signals.

Prior art

6. The prior art made record and not relied upon is considered pertinent to applicant's disclosure:

Duffett-Smith et al. ['168] disclose position determination system.

Hunaidi ['247] discloses PC multimedia-based leak detection system for water transmission and distribution pipes.

Simon Haykin discloses Communication systems 3rd Edition.

Response to Arguments

7. Applicant's arguments with respect to claims 1-24 have been considered but are moot in view of the new ground(s) of rejection.

Contact information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohamed Charioui whose telephone number is (571) 272-2213. The examiner can normally be reached Monday through Friday, from 9 am to 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S Hoff can be reached on (571) 272-2216. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mohamed Charioui

6/3/04



MARC S. HOFF
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